

APPENDIX L

Haile Gold Mine EIS

Supporting Information and Analysis for Aquatic Resources

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L. Supporting Information and Analysis for Aquatic Resources

This appendix provides the following information to support Sections 3.7 and 4.7, “Aquatic Resources” of the EIS:

- Summary of Survey Methods Used for all Aquatic Surveys Conducted in the Study Area (Table L-1)
- Summaries of Fish Collected in the Little Lynches River and Upper Lynches River Basins by Sampling Source and Event (Tables L-2, L-3, and L-4)
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- Summary of Herpetological Species Observed (Table L-13)
- Summary of Periphyton and Aquatic Vegetation Observed (Table L-14)

Please see Section 3.7 in the EIS for detailed information on the sources and figures used to compile the tables in this appendix.

Table L-1 Summary of Survey Methods Used for All Aquatic Surveys Conducted in the Study Area

Biota	Date	Survey Name-Year	Station Name	Waterbody	Equipment Used	Survey Method
Mussels	10/24/1992	Keferl-1992	All Locations	Haile Gold Mine Creek Little Lynches River	Metal rake	Visual survey, handpicking, and raking
Fish	7/31/1993	Rohde-1993	R93-1	Haile Gold Mine Creek	10x4ft x 1/8in mesh nylon flat seine	1-2 seine scoops
Fish	7/31/1993	Rohde-1993	R93-2	Haile Gold Mine Creek	10x4ft x 1/8in mesh nylon flat seine	1-2 seine scoops
Fish	7/31/1993	Rohde-1993	R93-3	Haile Gold Mine Creek	10x4ft x 1/8in mesh nylon flat seine	1-2 seine scoops
Fish	7/31/1993	Rohde-1993	R93-4	Haile Gold Mine Creek	10x4ft x 1/8in mesh nylon flat seine	1-2 seine scoops
Fish	7/31/1993	Rohde-1993	R93-5	Farm Pond	10x4ft x 1/8in mesh nylon flat seine	Seine hauls
Fish	7/31/1993	Rohde-1993	R93-6	Haile Gold Mine Creek	10x4ft x 1/8in mesh nylon flat seine	Seine hauls
Fish	7/31/1993	Rohde-1993	R93-7	Ledbetter Reservoir	10x4ft x 1/8in mesh nylon flat seine	Seine hauls
Fish	7/31/1993	Rohde-1993	R93-8	Haile Gold Mine Creek	10x4ft x 1/8in mesh nylon flat seine	Seine hauls
Fish	7/31/1993	Rohde-1993	R93-9	Little Lynches River	10x4ft x 1/8in mesh nylon flat seine	Numerous seine hauls
Fish	7/31/1993	Rohde-1993	R93-10	Little Lynches River	10x4ft x 1/8in mesh nylon flat seine	Numerous seine hauls
Fish	7/31/1993	Rohde-1993	R93-11	Camp Branch Creek	10x4ft x 1/8in mesh nylon flat seine	Seine hauls
Fish	7/23/2008	Rohde-2008	R08-1	Haile Gold Mine Creek	Large, fine-meshed dip net; 10x4ft x 1/4 inch mesh seine	Numerous dip net samples and 3 seine hauls
Fish	7/23/2008	Rohde-2008	R08-2	Haile Gold Mine Creek	Large, fine-meshed dip net; 10x4ft x 1/4 inch mesh seine	20 dip net samples and 3 seine hauls
Fish	7/23/2008	Rohde-2008	R08-3	Haile Gold Mine Creek	Large, fine-meshed dip net	Dip netting in 25 yard reach
Fish	7/23/2008	Rohde-2008	R08-4	Haile Gold Mine Creek	Large, fine-meshed dip net	Numerous dip net samples
Fish	7/23/2008	Rohde-2008	R08-5	Haile Gold Mine Creek	Large, fine-meshed dip net	Numerous dip net samples
Fish	7/23/2008	Rohde-2008	R08-6	Haile Gold Mine Creek	Large, fine-meshed dip net	Numerous dip net samples
Fish	7/23/2008	Rohde-2008	R08-7	Haile Gold Mine Creek		Visual survey
Fish	7/23/2008	Rohde-2008	R08-8 (down)	Little Lynches River	10x4ft x 1/4 inch mesh seine	Seine hauls
Fish	7/23/2008	Rohde-2008	R08-8 (up)	Little Lynches River	10x4ft x 1/4 inch mesh seine	Seine hauls
Fish	7/23/2008	Rohde-2008	R08-9	Little Lynches River	10x4ft x 1/4 inch mesh seine	Seine hauls in 75-yard reach
Mussels	7/24/2008-7/25/2008	Keferl-2008	All Locations	Haile Gold Mine Creek Little Lynches River	Metal rake	Visual survey, handpicking, and raking

Biota	Date	Survey Name-Year	Station Name	Waterbody	Equipment Used	Survey Method
Fish	8/2/2010	Rohde-2010	R10-1	Camp Branch Creek	Large, fine-meshed dip net	Numerous dip net samples
Fish	8/2/2010	Rohde-2010	R10-2	Camp Branch Creek	Kick sets (fish were flushed from substrate by kicking into dip net)	Two short kick sets
Fish	8/2/2010	Rohde-2010	R10-3	Camp Branch Creek	Large, fine-meshed dip net	Numerous dip net samples
Fish	8/2/2010	Rohde-2010	R10-4	Camp Branch Creek	Large, fine-meshed dip net	Numerous dip net samples
Fish	8/2/2010	Rohde-2010	R10-5	Camp Branch Creek	Large, fine-meshed dip net	Numerous dip net samples
Fish	8/2/2010	Rohde-2010	R10-6	Camp Branch Creek	10x4ft x 1/4 inch mesh seine	Seine hauls
Mussels	8/11/2010	Keferl-2010	All Locations	Camp Branch Creek	Metal rake	Visual survey, handpicking, and raking
Invertebrates	Annual	ETT-1987-2010	2A	Haile Gold Mine Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	Annual	ETT-1987-2010	2B	Ledbetter Reservoir	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	Annual	ETT-1987-2010	2C	Ledbetter Reservoir	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	Annual	ETT-1987-2010	3	Ledbetter Reservoir	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	Annual	ETT-1987-2010	3A	Haile Gold Mine Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	Annual	ETT-1987-2010	4	Haile Gold Mine Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection

Biota	Date	Survey Name-Year	Station Name	Waterbody	Equipment Used	Survey Method
Invertebrates	Annual	ETT-1987-2010	5	Haile Gold Mine Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	Annual	ETT-1987-2010	6	Haile Gold Mine Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	Annual	ETT-1987-2010	8	Haile Gold Mine Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	Annual	ETT-1987-2010	9	Haile Gold Mine Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	Annual	ETT-1987-2010	10	Little Lynches River	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	Annual	ETT-1987-2010	11	Little Lynches River	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	4/25/2011	ETT-2011	CB1	Camp Branch Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	4/25/2011	ETT-2011	CB2	Camp Branch Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection

Biota	Date	Survey Name-Year	Station Name	Waterbody	Equipment Used	Survey Method
Invertebrates	4/25/2011	ETT-2011	LL1	Little Lynches River	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	4/25/2011	ETT-2011	B	Haile Gold Mine Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Fish	3/23/2011	SCDNR Stream Assessment-2011	HGM 1	Haile Gold Mine Creek		SC Stream Assessment sops
Fish	3/23/2011	SCDNR Stream Assessment-2011	HGM 1A	Haile Gold Mine Creek		SC Stream Assessment sops
Fish	3/23/2011	SCDNR Stream Assessment-2011	HGM 2	Camp Branch Creek		SC Stream Assessment sops
Fish	3/24/2011	SCDNR Stream Assessment-2011	SC11-86893	Little Lynches River		SC Stream Assessment sops
Fish	3/24/2011	SCDNR Stream Assessment-2011	SC11-94450	Little Lynches River		SC Stream Assessment sops
Mussels	8/24/2011	Alderman-2011	110824.1	Buffalo Creek		Visual/tactile
Mussels	8/24/2011	Alderman-2011	110824.2	Buffalo Creek		Visual/tactile
Mussels	8/24/2011	Alderman-2011	110824.3	Little Buffalo Creek		Visual
Mussels	8/24/2011	Alderman-2011	110824.4	Buffalo Creek		Visual
Mussels	8/24/2011	Alderman-2011	110824.5	Buffalo Creek		Visual/tactile
Mussels	8/24/2011	Alderman-2011	110824.6	Buffalo Creek		Visual/tactile
Mussels	8/24/2011	Alderman-2011	110824.8	Buffalo Creek		Visual/tactile
Mussels	9/7/2011	Alderman-2011	110907.1 a-c	Little Lynches River		Visual/tactile
Mussels	9/9/2011	Alderman-2011	110909.1 a-b	Camp Branch Creek		Visual/tactile
Mussels	9/13/2011	Alderman-2011	110913.1 a-b	Unnamed Tributary		Visual/tactile

Biota	Date	Survey Name-Year	Station Name	Waterbody	Equipment Used	Survey Method
Mussels	9/14/2011	Alderman-2011	110914.1	Haile Gold Mine Creek		Visual/tactile
Fish	10/23/2011	Aquatic Resources-2011	BC2-11	Buffalo Creek	Backpack electrofishing, block nets, seines	1 survey pass with 2 backpacks
Fish	10/23/2011	Aquatic Resources-2011	BC4-11	Buffalo Creek	Backpack electrofishing, block nets, seines	3 survey passes with 2 backpacks
Fish	10/23/2011	Aquatic Resources-2011	CB2-11	Camp Branch Creek	Backpack electrofishing, block nets, seines	1 survey pass with 1 backpack
Fish	10/23/2011	Aquatic Resources-2011	CB3-11	Camp Branch Creek	Backpack electrofishing, block nets, seines	1 survey pass with 2 backpacks
Fish	10/23/2011	Aquatic Resources-2011	HGMC1-11	Haile Gold Mine Creek	Backpack electrofishing, block nets, seines	1 survey pass with 1 backpack; supplemented with sweep netting
Fish	10/23/2011	Aquatic Resources-2011	HGMC2-11	Haile Gold Mine Creek	Backpack electrofishing, block nets, seines	1 survey pass with 1 backpack
Fish	10/23/2011	Aquatic Resources-2011	LLR1-11	Little Lynches River	Backpack electrofishing, block nets, seines	1 survey pass with 2 backpacks
Fish	10/23/2011	Aquatic Resources-2011	LLR2-11	Little Lynches River	Backpack electrofishing, block nets, seines	1 survey pass with 3 backpacks
Fish	10/23/2011	Aquatic Resources-2011	LLR4-11	Little Lynches River	Backpack electrofishing, block nets, seines	1 survey pass with 3 backpacks
Fish	10/23/2011	Aquatic Resources-2011	LLR5-11	Little Lynches River	Backpack electrofishing, block nets, seines	1 survey pass with 3 backpacks
Fish	10/23/2011	Aquatic Resources-2011	UT1-11		Backpack electrofishing, block nets, seines	1 survey pass with 1 backpack
Invertebrates/herptiles ^a	11/1/2011	Aquatic Resources-2011	BC2-11	Buffalo Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates/herptiles ^a	11/1/2011	Aquatic Resources-2011	BC4-11	Buffalo Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection

Biota	Date	Survey Name-Year	Station Name	Waterbody	Equipment Used	Survey Method
Invertebrates/herptiles ^a	11/2/2011	Aquatic Resources-2011	CB1-11	Camp Branch Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates/herptiles ^a	11/1/2011	Aquatic Resources-2011	CB3-11	Camp Branch Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates/herptiles ^a	11/1/2011	Aquatic Resources-2011	HGMC1-11	Haile Gold Mine Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates/herptiles ^a	10/18/2011	Aquatic Resources-2011	HGMC2-11	Haile Gold Mine Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates/herptiles ^a	10/18/2011	Aquatic Resources-2011	LLR1-11	Little Lynches River	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates/herptiles ^a	10/18/2011	Aquatic Resources-2011	LLR2-11	Little Lynches River	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates/herptiles ^a	10/18/2011	Aquatic Resources-2011	LLR3-11	Little Lynches River	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates/herptiles ^a	10/18/2011	Aquatic Resources-2011	LLR4-11	Little Lynches River	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection

Biota	Date	Survey Name-Year	Station Name	Waterbody	Equipment Used	Survey Method
Invertebrates/herptiles ^a	11/1/2011	Aquatic Resources-2011	LLR5-11	Little Lynches River	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates/herptiles ^a	11/2/2011	Aquatic Resources-2011	LLR6-11	Little Lynches River	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Migratory fish	3/27/2012	Migratory Fish-2012	MFS1	Little Lynches River	Backpack electrofishing, fyke net, eel trap	1 survey pass with 2 backpacks and two netters once per day; single fyke net (2 lead net wings and series of hoops to bag) set daily for 3 days; 10 Gee ell pot traps set daily for 3 days
Migratory fish	3/27/2012	Migratory Fish-2012	MFS2	Little Lynches River	Backpack electrofishing, fyke net, eel trap	1 survey pass with 2 backpacks and two netters once per day; single fyke net (2 lead net wings and series of hoops to bag) set daily for 3 days; 10 Gee ell pot traps set daily for 3 days
Migratory fish	3/27/2012	Migratory Fish-2012	MFS3	Little Lynches River	Backpack electrofishing, fyke net, eel trap	1 survey pass with 2 backpacks and two netters once per day; single fyke net (2 lead net wings and series of hoops to bag) set daily for 3 days; 10 Gee ell pot traps set daily for 3 days
Migratory fish	3/27/2012	Migratory Fish-2012	MFS4	Haile Gold Mine Creek	Backpack electrofishing	1 survey pass with 1 backpack and 2 netters
Migratory fish	3/27/2012	Migratory Fish-2012	MFS5	Champion Branch	Backpack electrofishing	1 survey pass with 1 backpack and 2 netters

Biota	Date	Survey Name-Year	Station Name	Waterbody	Equipment Used	Survey Method
Migratory fish	3/27/2012	Migratory Fish-2012	MFS6	Camp Branch Creek	Backpack electrofishing	1 survey pass with 1 backpack and 2 netters
Fish/herptiles	4/6/2012	Aquatic Resources-2012	BC2-12	Buffalo Creek	Backpack electrofishing, block nets, seines	1 survey pass with 2 backpacks
Fish/herptiles	4/4/2012	Aquatic Resources-2012	CB2-12	Camp Branch Creek	Backpack electrofishing, block nets, seines	1 survey pass with 1 backpack
Fish/herptiles	4/4/2012	Aquatic Resources-2012	CB3-12	Camp Branch Creek	Backpack electrofishing, block nets, seines	1 survey pass with 2 backpacks
Fish/herptiles	4/5/2012	Aquatic Resources-2012	CB4-12	Camp Branch Creek	Backpack electrofishing, block nets, seines	1 survey pass with 2 backpacks
Fish/herptiles	4/4/2012	Aquatic Resources-2012	CB5-12	Camp Branch Creek	Backpack electrofishing, block nets, seines	1 survey pass with 1 backpack
Fish/herptiles	4/4/2012	Aquatic Resources-2012	CB6-12	Camp Branch Creek	Backpack electrofishing, block nets, seines	1 survey pass with 2 backpacks
Fish/herptiles	4/6/2012	Aquatic Resources-2012	HGMC1-12	Haile Gold Mine Creek	Backpack electrofishing, block nets, seines	1 survey pass with 1 backpack
Fish/herptiles	4/7/2012	Aquatic Resources-2012	HGMC2-12	Haile Gold Mine Creek	Backpack electrofishing, block nets, seines	1 survey pass with 1 backpack
Fish/herptiles	4/6/2012	Aquatic Resources-2012	HGMC3-12	Haile Gold Mine Creek	Backpack electrofishing, block nets, seines	1 survey pass with 1 backpack
Fish/herptiles	4/6/2012	Aquatic Resources-2012	HGMC4-12	Haile Gold Mine Creek	Backpack electrofishing, block nets, seines	1 survey pass with 1 backpack
Fish/herptiles	4/6/2012	Aquatic Resources-2012	HGMC5-12	Haile Gold Mine Creek	Backpack electrofishing, block nets, seines	1 survey pass with 2 backpacks
Fish/herptiles	4/7/2012	Aquatic Resources-2012	LLR1-12	Little Lynches River	Backpack electrofishing, block nets, seines	1 survey pass with 2 backpacks
Fish/herptiles	4/7/2012	Aquatic Resources-2012	LLR2-12	Little Lynches River	Backpack electrofishing, block nets, seines	1 survey pass with 3 backpacks
Fish/herptiles	4/8/2012	Aquatic Resources-2012	LLR4-12	Little Lynches River	Backpack electrofishing, block nets, seines	1 survey pass with 3 backpacks
Fish/herptiles	4/8/2012	Aquatic Resources-2012	UT1-12	Unnamed Tributary	Backpack electrofishing, block nets, seines	1 survey pass with 1 backpack

Biota	Date	Survey Name-Year	Station Name	Waterbody	Equipment Used	Survey Method
Invertebrates	4/24-4/26/2012	Aquatic Resources-2012	BC2-12	Buffalo Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	4/24-4/26/2012	Aquatic Resources-2012	CB2-12	Camp Branch Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	4/24-4/26/2012	Aquatic Resources-2012	CB3-12	Camp Branch Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	4/24-4/26/2012	Aquatic Resources-2012	CB4-12	Camp Branch Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	4/24-4/26/2012	Aquatic Resources-2012	CB5-12	Camp Branch Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	4/24-4/26/2012	Aquatic Resources-2012	CB6-12	Camp Branch Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	4/24-4/26/2012	Aquatic Resources-2012	HGMC1-12	Haile Gold Mine Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	4/24-4/26/2012	Aquatic Resources-2012	HGMC2-12	Haile Gold Mine Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection

Biota	Date	Survey Name-Year	Station Name	Waterbody	Equipment Used	Survey Method
Invertebrates	4/24-4/26/2012	Aquatic Resources-2012	HGMC3-12	Haile Gold Mine Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	4/24-4/26/2012	Aquatic Resources-2012	HGMC4-12	Haile Gold Mine Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	4/24-4/26/2012	Aquatic Resources-2012	HGMC5-12	Haile Gold Mine Creek	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	4/24-4/26/2012	Aquatic Resources-2012	LLR1-12	Little Lynches River	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	4/24-4/26/2012	Aquatic Resources-2012	LLR2-12	Little Lynches River	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	4/24-4/26/2012	Aquatic Resources-2012	LLR3-12	Little Lynches River	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	4/24-4/26/2012	Aquatic Resources-2012	LLR4-12	Little Lynches River	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection
Invertebrates	4/24-4/26/2012	Aquatic Resources-2012	LLR6-12	Little Lynches River	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection

Biota	Date	Survey Name-Year	Station Name	Waterbody	Equipment Used	Survey Method
Invertebrates	4/24-4/26/2012	Aquatic Resources-2012	UT1-12	Unnamed Tributary	600 um mesh dip net, kick net, #30 mesh sieve, fine screen mesh net, hand collection	Bottom substrate-dip net; riffles-dip net, kick net, sieve; midges-mesh net; snags-hand collection

^a Herptiles include amphibians and reptiles.

Table L-2 Fish Surveys Conducted by Rohde in 1993, 2008, and 2010

Genus	Species	Common Name	Rohde-1993							Rohde-2008					Rohde-2010						
			R93-1	R93-2	R93-5	R93-7	R93-9	R93-10	R93-11	R08-1	R08-2	R08-3	R08-8 (down)	R08-8 (up)	R08-9	R10-1	R10-2	R10-3	R10-4	R10-5	R10-6
<i>Slinostomus</i>	<i>funduloides</i>	Rosyside dace							24						1			1		++	
<i>Cyprinella</i>	<i>chloristia</i>	Greenfin shiner ^a												1	15						
<i>Cyprinella</i>	<i>nivea</i>	Whitefin shiner						20													
<i>Cyprinella</i>	<i>pyrrhomela</i>	Fieryblack shiner ^a							3												
<i>Nocomis</i>	<i>leptocephalus</i>	Bluehead chub					7	24	11					4	8					++	
<i>Notemigonus</i>	<i>crysoleucas</i>	Golden shiner					1							12							
<i>Notropis</i>	<i>altipinnis</i>	Highfin shiner					12	117	16					8	80+					++	
<i>Notropis</i>	<i>chlorocephalus</i>	Greenhead Shiner ^b					7	6	11											++	
<i>Notropis</i>	<i>procne</i>	Swallowtail shiner					10							2							
<i>Semotilus</i>	<i>atromaculatus</i>	Creek chub					4		2											++	
<i>Semotilus</i>	<i>lumbee</i>	Sandhills chub ^c	75	13						83	17	21					23	++		++	
<i>Erimyzon</i>	<i>oblongus</i>	Creek chubsucker												1	3				3		
<i>Minytrema</i>	<i>melanops</i>	Spotted sucker												1							
<i>Scartomyzon</i>	sp.	Brassy jumprock						3	2												
<i>Ameiurus</i>	<i>natalis</i>	Yellow bullhead													1						
<i>Ameiurus</i>	<i>platycephalus</i>	Flat bullhead ^a					2														
<i>Noturus</i>	<i>insignis</i>	Margined madtom					3														
<i>Gambusia</i>	<i>holbrooki</i>	Eastern mosquitofish		15		2							3		1						
<i>Aphredoderus</i>	<i>sayanus</i>	Pirate perch	2	11		1				45	115				1	8					
<i>Acantharchus</i>	<i>pomotis</i>	Mud sunfish ^a		1						9	6										
<i>Lepomis</i>	<i>auritus</i>	Redbreast sunfish					1	3	7				5		6		6				
<i>Lepomis</i>	<i>cyanellus</i>	Green sunfish																	1		
<i>Lepomis</i>	<i>gibbosus</i>	Pumpkinseed											1		2						
<i>Lepomis</i>	<i>macrochirus</i>	Bluegill		10	3	3							3	3					++		
<i>Lepomis</i>	<i>marginatus</i>	Dollar sunfish					3						1		3		3		1		
<i>Lepomis</i>	<i>microlophus</i>	Redear sunfish		2																	
<i>Micropterus</i>	<i>salmoides</i>	Largemouth bass		2		1	4							1	3						
<i>Etheostoma</i>	<i>olmstedi</i>	Tessellated darter				17	14	10					5	8	35		2		++		
<i>Percina</i>	<i>crassa</i>	Piedmont darter ^b					4	17						1							
Species Richness			2	3	4	2	14	11	8	3	3	1	6	11	12	1	3	2	3	1	8
Total Number of Individuals			77	25	29	4	67	221	83	137	138	21	18	42	159	8	31	4	--e	1	--e

a South Carolina Moderate Priority Designation.

b South Carolina High Priority Designation.

c South Carolina Highest Priority Designation.

d Individuals captured outside survey area.

e Totals not available due to no numbers being reported.

Table L-3 Fish Surveys Conducted by the South Carolina Department of Natural Resources (SCDNR) in 2011

Genus	Species	Common Name	SCDNR-Spring 2011				
			HGM 1	HGM 1A	HGM 2	86893	94450
<i>Slinostomus</i>	<i>funduloides</i>	Rosyside dace			19	17	1
<i>Cyprinella</i>	<i>chloristia</i>	Greenfin shiner ^a					3
<i>Nocomis</i>	<i>leptocephalus</i>	Bluehead chub			56	105	57
<i>Notemigonus</i>	<i>crysoleucas</i>	Golden shiner	2 ^d				
<i>Notropis</i>	<i>altipinnis</i>	Highfin shiner				108	24
<i>Notropis</i>	<i>chlorocephalus</i>	Greenhead Shiner ^b			4		
<i>Notropis</i>	<i>cummingsae</i>	Dusky shiner					1
<i>Notropis</i>	<i>petersoni</i>	Coastal shiner					5
<i>Notropis</i>	<i>procne</i>	Swallowtail shiner				65	15
<i>Notropis</i>	<i>scepticus</i>	Sandbar shiner					4
<i>Semotilus</i>	<i>atromaculatus</i>	Creek chub			4	9	3
<i>Semotilus</i>	<i>lumbee</i>	Sandhills chub ^c		25			
<i>Erimyzon</i>	<i>oblongus</i>	Creek chubsucker	1 ^d			7	1
<i>Scartomyzon</i>	sp.	Brassy jumprock					2
<i>Ameiurus</i>	<i>brunneus</i>	Snail bullhead ^a				2	
<i>Ameiurus</i>	<i>platycephalus</i>	Flat bullhead ^a	1			5	13
<i>Noturus</i>	<i>gyrinus</i>	Tadpole madtom				2	1
<i>Noturus</i>	<i>insignis</i>	Margined madtom			5	8	28
<i>Esox</i>	<i>americanus</i>	Redfin pickerel					2
<i>Esox</i>	<i>niger</i>	Chain pickerel					1
<i>Aphredoderus</i>	<i>sayanus</i>	Pirate perch				42	10
<i>Lepomis</i>	<i>auritus</i>	Redbreast sunfish			1	1	49
<i>Lepomis</i>	<i>cyanellus</i>	Green sunfish	1			5	2
<i>Lepomis</i>	<i>gibbosus</i>	Pumpkinseed					4
<i>Lepomis</i>	<i>macrochirus</i>	Bluegill	1 ^d				19
<i>Lepomis</i>	<i>microlophus</i>	Redear sunfish					2
<i>Etheostoma</i>	<i>olmstedi</i>	Tessellated darter			22	445	80
<i>Percina</i>	<i>crassa</i>	Piedmont darter ^b					8
<i>Umbra</i>	<i>pygmaea</i>	Eastern mudminnow					1
Species Richness			5	1	7	14	25
Total Number of Individuals			6	25	111	821	336

^a South Carolina Moderate Priority Designation.

^b South Carolina High Priority Designation.

^c South Carolina Highest Priority Designation.

^d Individuals captured outside survey area.

Table L-4 Fish Surveys by Conducted by ARCADIS in 2011 and 2012

Genus	Species	Common Name	Haile Aquatic Resources-Fall 2011										Migratory Fish-2012			Haile Aquatic Resources-Spring 2012																
			HGMC2-11	CB2-11	CB3-11	UT1-11	BC2-11	BC4-11	LLR1-11	LLR2-11	LLR4-11	LLR5-11	MFS 1	MFS 2	MFS 3	BC2-12	CB2-12	CB3-12	CB4-12	CB5-12	CB6-12	HGMC2-12	HGMC3-12	HGMC4-12	HGMC5-12	LLR1-12	LLR2-12	LLR4-12	UT1-12			
<i>Anguilla</i>	<i>rostrata</i>	American eel ^c											2		5																	
<i>Slinostomus</i>	<i>funduloides</i>	Rosyside dace		169	98			1				9	1				100	36			57							1				
<i>Cyprinella</i>	<i>chloristia</i>	Greenfin shiner ^a			2				57		2	72	66	138													64		10			
<i>Nocomis</i>	<i>leptocephalus</i>	Bluehead chub		247	91			9	19	5	75	160	86	107			52	70		1	12						24	2	29			
<i>Notemigonus</i>	<i>crysoleucas</i>	Golden shiner									2	3																	1			
<i>Notropis</i>	<i>altipinnis</i>	Highfin shiner			8				302	784	34	209	77														62	822	58			
<i>Notropis</i>	<i>chlorocephalus</i>	Greenhead Shiner ^b		97	10										9		24	2												1		
<i>Notropis</i>	<i>cummingsae</i>	Dusky shiner					3	705	1		6	9	1																	3		
<i>Notropis</i>	<i>petersoni</i>	Coastal shiner													4	3																
<i>Notropis</i>	<i>procne</i>	Swallowtail shiner							173	198	42	116	32	1														51	68	26		
<i>Notropis</i>	<i>scepticus</i>	Sandbar shiner													11																	
<i>Semotilus</i>	<i>atromaculatus</i>	Creek chub		67	50				10	1	3	4					22	34	13	13	13											
<i>Semotilus</i>	<i>lumbee</i>	Sandhills chub ^c				132	9	45									14									60	51	22		42		
<i>Erimyzon</i>	<i>oblongus</i>	Creek chubsucker	1	12	17		1	21	4	7	11	5	2	1		2		7	7		4								4			
<i>Minytrema</i>	<i>melanops</i>	Spotted sucker										2			8																	
<i>Scartomyzon</i>	<i>sp.</i>	Brassy jumprock											1	2																5		
<i>Ameiurus</i>	<i>melas</i>	Black bullhead							2						1																	
<i>Ameiurus</i>	<i>natalis</i>	Yellow bullhead													1												1					
<i>Ameiurus</i>	<i>platycephalus</i>	Flat bullhead ^a							2	8			1	4	2													3		2		
<i>Noturus</i>	<i>gyrinus</i>	Tadpole madtom									1				2																	
<i>Noturus</i>	<i>insignis</i>	Margined madtom	15	3			4	2	2	2	6	1	3			10	3										2		2			
<i>Esox</i>	<i>americanus</i>	Redfin pickerel				2	10			1			1		1		4													2		
<i>Gambusia</i>	<i>holbrooki</i>	Eastern mosquitofish					18			4	17	1																2	4			
<i>Aphredoderus</i>	<i>sayanus</i>	Pirate perch	10	7	3	6	12	47	35	37	27	17	13	2	7	7	5	15		1					1	56	9	10	7	5		
<i>Acantharchus</i>	<i>pomotis</i>	Mud sunfish ^a				1																				2	2					
<i>Centrarchus</i>	<i>macropterus</i>	Flier										1																				
<i>Enneacanthus</i>	<i>gloriosus</i>	Bluespotted sunfish						1																								
<i>Lepomis</i>	<i>auritus</i>	Redbreast sunfish	27	17			49	30	67	60	43	95	16			32	21	31	2	9							46	86	43			
<i>Lepomis</i>	<i>cyanellus</i>	Green sunfish	1		4			1	3	1	1	1				1	2	18	3	3							2	7	2			
<i>Lepomis</i>	<i>gibbosus</i>	Pumpkinseed									5	16																	3			
<i>Lepomis</i>	<i>gulosus</i>	Warmouth									1																					
<i>Lepomis</i>	<i>macrochirus</i>	Bluegill	1	8	2		6	11	5	11	28															4	3	2	6			
<i>Lepomis</i>	<i>marginalis</i>	Dollar sunfish									1																3	1				
<i>Lepomis</i>	sp. (Young Of Year)	Sunfish species										25																				
<i>Micropterus</i>	<i>salmoides</i>	Largemouth bass						10	3	2	3																	1		3		
<i>Etheostoma</i>	<i>olmstedi</i>	Tessellated darter	39	17		1	171	71	72	43	78	9	4			4	9		2	3						25	32	19				
<i>Etheostoma</i>	<i>serifer</i>	Sawcheek darter						1																								
<i>Percina</i>	<i>crassa</i>	Piedmont darter ^b										1																		2		
<i>Perca</i>	<i>flavescens</i>	Yellow perch									1																			1		
Species Richness			3	10	13	2	7	15	15	13	21	25	15	13	7	5	9	10	5	5	8	1	1	3	4	14	11	21	2			
Total Number of Individuals			3	691	326	135	23	1055	740	1190	352	840	392	303	23	28	252	189	84	21	102	1	60	54	84	296	1033	232	47			

^a South Carolina Moderate Priority Designation.

b South Carolina High Priority Designation.

c South Carolina Highest Priority Designation.

Table L-5 Fish Surveys Conducted in Streams Outside the Project Boundary

Genus	Species	Common Name	Unnamed Tributary		Buffalo Creek		
			UT1-12	UT1-11	BC2-12	BC2-11	BC4-11
<i>Slinostomus</i>	<i>funduloides</i>	Rosyside dace					1
<i>Nocomis</i>	<i>leptocephalus</i>	Bluehead chub					9
<i>Notropis</i>	<i>cummingsae</i>	Dusky shiner				3	705
<i>Semotilus</i>	<i>lumbee</i>	Sandhills chub ^c	42	132	14	9	45
<i>Erimyzon</i>	<i>oblongus</i>	Creek chubsucker			2	1	21
<i>Ameiurus</i>	<i>natalis</i>	Yellow bullhead			1		2
<i>Noturus</i>	<i>insignis</i>	Margined madtom					4
<i>Esox</i>	<i>americanus</i>	Redfin pickerel			4	2	10
<i>Gambusia</i>	<i>holbrooki</i>	Eastern mosquitofish					18
<i>Aphredoderus</i>	<i>sayanus</i>	Pirate perch	5	3	7	6	12
<i>Acantharchus</i>	<i>pomotis</i>	Mud sunfish ^a				1	
<i>Enneacanthus</i>	<i>gloriosus</i>	Bluespotted sunfish					1
<i>Lepomis</i>	<i>auritus</i>	Redbreast sunfish					49
<i>Lepomis</i>	<i>macrochirus</i>	Bluegill					6
<i>Etheostoma</i>	<i>olmstedi</i>	Tessellated darter				1	171
<i>Etheostoma</i>	<i>serrifer</i>	Sawcheek darter					1
Species Richness			2	2	5	7	15
Total Number of Individuals			47	135	28	23	1055

^a South Carolina Moderate Priority Designation.

^b South Carolina High Priority Designation.

^c South Carolina Highest Priority Designation.

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Table L-6 Fish Surveys in Conducted in Camp Branch Creek

Genus	Species	Common Name	Camp Branch Creek														
			CB2-12	CB3-12	CB4-12	CB5-12	CB6-12	CB2-11	CB3-11	HGM 2	R10-1	R10-2	R10-3	R10-4	R10-5	R10-6	R93-11
<i>Slinostomus</i>	<i>funduloides</i>	Rosyside dace	100	36			57	169	98	19			1			++	24
<i>Cyprinella</i>	<i>chloristia</i>	Greenfin shiner ^a							2								
<i>Nocomis</i>	<i>leptocephalus</i>	Bluehead chub	52	70		1	12	247	91	56						++	11
<i>Notropis</i>	<i>altipinnis</i>	Highfin shiner							8							++	16
<i>Notropis</i>	<i>chlorocephalus</i>	Greenhead Shiner ^b	24	2					97	10	4					++	11
<i>Semotilus</i>	<i>atromaculatus</i>	Creek chub	22	34	13	13	13	67	50	4						++	2
<i>Semotilus</i>	<i>lumbee</i>	Sandhills chub ^c										23		++		++	
<i>Erimyzon</i>	<i>oblongus</i>	Creek chubsucker		7	7		4	12	17					3			
<i>Scartomyzon</i>	sp.	Brassy jumprock															2
<i>Noturus</i>	<i>insignis</i>	Margined madtom	10	3					15	3	5						
<i>Aphredoderus</i>	<i>sayanus</i>	Pirate perch	7	5	15		1	10	7		8						
<i>Lepomis</i>	<i>auritus</i>	Redbreast sunfish	32	21	31	2	9	27	17	1		6					7
<i>Lepomis</i>	<i>cyanellus</i>	Green sunfish	1	2	18	3	3		4					1			
<i>Lepomis</i>	<i>macrochirus</i>	Bluegill						8	2							++	
<i>Lepomis</i>	<i>marginatus</i>	Dollar sunfish											3		1		
<i>Etheostoma</i>	<i>olmstedi</i>	Tessellated darter	4	9		2	3	39	17	22		2				++	10
Species Richness			9	10	5	5	8	10	13	7	1	3	2	3	1	8	8
Total Number of Individuals			252	189	84	21	102	691	326	111	8	31	4	-- ^e	1	-- ^e	83

^a South Carolina Moderate Priority Designation.

^b South Carolina High Priority Designation.

^c South Carolina Highest Priority Designation.

^d Individuals captured outside survey area.

^e Totals not available due to no numbers being reported.

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Table L-7 Fish Surveys Conducted in Haile Gold Mine Creek

Genus	Species	Common Name	Haile Gold Mine Creek											
			HGMC2-12	HGMC3-12	HGMC4-12	HGMC5-12	HGMC2-11	HGM 1	HGM 1A	R08-1	R08-2	R08-3	R93-1	R93-2
<i>Notemigonus</i>	<i>crysoleucas</i>	Golden shiner						2 ^d						
<i>Semotilus</i>	<i>lumbee</i>	Sandhills chub ^c		60	51	22			25	83	17	21	75	13
<i>Erimyzon</i>	<i>oblongus</i>	Creek chubsucker					1	1 ^d						
<i>Ameiurus</i>	<i>natalis</i>	Yellow bullhead	1											
<i>Ameiurus</i>	<i>platycephalus</i>	Flat bullhead ^a						1						
<i>Aphredoderus</i>	<i>sayanus</i>	Pirate perch			1	56				45	115		2	11
<i>Acantharchus</i>	<i>pomotis</i>	Mud sunfish ^a			2	2				9	6			1
<i>Lepomis</i>	<i>cyanellus</i>	Green sunfish					1	1						
<i>Lepomis</i>	<i>macrochirus</i>	Bluegill				4	1	1 ^d						
Species Richness			1	1	3	4	3	5	1	3	3	1	2	3
Total Number of Individuals			1	60	54	84	3	6	25	137	138	21	77	25

^a South Carolina Moderate Priority Designation.

^b South Carolina High Priority Designation.

^c South Carolina Highest Priority Designation.

^d Individuals captured outside survey area.

Table L-8 Fish Surveys Conducted in Little Lynches River

Genus	Species	Common Name	Little Lynches River																
			LLR1-12	LLR2-12	LLR4-12	MFS1	MFS2	MFS3	LLR1-11	LLR2-11	LLR4-11	LLR5-11	86893	94450	R08-8 (down)	R08-8 (up)	R08-9	R93-9	R93-10
<i>Anguilla</i>	<i>rostrata</i>	American eel ^c				2		5											
<i>Slinostomus</i>	<i>funduloides</i>	Rosyside dace	1								9	1	17	1			1		
<i>Cyprinella</i>	<i>chloristia</i>	Greenfin shiner ^a	64		10	66	138		57		2	72		3		1	15		
<i>Cyprinella</i>	<i>nivea</i>	Whitefin shiner															20		
<i>Cyprinella</i>	<i>pyrrhomela</i>	Fieryblack shiner ^a															3		
<i>Nocomis</i>	<i>leptocephalus</i>	Bluehead chub	24	2	29	86	107		19	5	75	160	105	57		4	8	7	24
<i>Notemigonus</i>	<i>crysoleucas</i>	Golden shiner		1							2	3				12		1	
<i>Notropis</i>	<i>altipinnis</i>	Highfin shiner	62	822	58	77			302	784	34	209	108	24		8	80+	12	117
<i>Notropis</i>	<i>chlorocephalus</i>	Greenhead Shiner ^b			1		9										7	6	
<i>Notropis</i>	<i>cummingsae</i>	Dusky shiner			3	1			1		6	9		1					
<i>Notropis</i>	<i>petersoni</i>	Coastal shiner					4	3						5					
<i>Notropis</i>	<i>procne</i>	Swallowtail shiner	51	68	26	32	1		173	198	42	116	65	15		2			10
<i>Notropis</i>	<i>scepticus</i>	Sandbar shiner											11		4				
<i>Semotilus</i>	<i>atromaculatus</i>	Creek chub							10	1	3	4	9	3				4	
<i>Erimyzon</i>	<i>oblongus</i>	Creek chubsucker			4	2	1		4	7	11	5	7	1		1	3		
<i>Minytrema</i>	<i>melanops</i>	Spotted sucker						8				2				1			
<i>Scartomyzon</i>	sp.	Brassy jumprock			5	1	2							2				3	
<i>Ameiurus</i>	<i>brunneus</i>	Snail bullhead ^a											2						
<i>Ameiurus</i>	<i>melas</i>	Black bullhead						1											
<i>Ameiurus</i>	<i>natalis</i>	Yellow bullhead														1			
<i>Ameiurus</i>	<i>platycephalus</i>	Flat bullhead ^a	3		2	1	4	2	2	8			5	13				2	
<i>Noturus</i>	<i>gyrinus</i>	Tadpole madtom						2			1		2	1					
<i>Noturus</i>	<i>insignis</i>	Margined madtom	2		2	1	3		2	2	2	6	8	28			3		
<i>Esox</i>	<i>americanus</i>	Redfin pickerel			2		1				1			2					
<i>Esox</i>	<i>niger</i>	Chain pickerel												1					
<i>Gambusia</i>	<i>holbrooki</i>	Eastern mosquitofish		2	4	1					4	17		3		1	2		
<i>Aphredoderus</i>	<i>sayanus</i>	Pirate perch	9	10	7	17	13	2	47	35	37	27	42	10			1		
<i>Centrarchus</i>	<i>macropterus</i>	Flier										1							
<i>Lepomis</i>	<i>auritus</i>	Redbreast sunfish	46	86	43	95	16		30	67	60	43	1	49	5	6	1	3	
<i>Lepomis</i>	<i>cyanellus</i>	Green sunfish	2	7	2	1			1	3	1	1	5	2					
<i>Lepomis</i>	<i>gibbosus</i>	Pumpkinseed			3						5	16		4	1		2		
<i>Lepomis</i>	<i>gulosus</i>	Warmouth								1									
<i>Lepomis</i>	<i>macrochirus</i>	Bluegill	3	2	6				11	5	11	28		19	3	3	3		
<i>Lepomis</i>	<i>marginatus</i>	Dollar sunfish	3	1							1			1		3	3		
<i>Lepomis</i>	<i>microlophus</i>	Redear sunfish												2					
<i>Lepomis</i>	sp. (Young of Year)	Sunfish species										25							
<i>Micropterus</i>	<i>salmoides</i>	Largemouth bass	1		3				10	3	2	3			1	3	1	4	
<i>Etheostoma</i>	<i>olmstedi</i>	Tessellated darter	25	32	19	9	4		71	72	43	78	445	80	5	8	35	17	14
<i>Percina</i>	<i>crassa</i>	Piedmont darter ^b			2						1		8		1		4	17	
<i>Perca</i>	<i>flavescens</i>	Yellow perch			1						1								
<i>Umbra</i>	<i>pygmaea</i>	Eastern mudminnow												1					
Species Richness			14	11	21	15	13	7	15	13	21	25	14	25	6	11	12	14	11
Total Number of Individuals			296	1033	232	392	303	23	740	1190	352	840	821	336	18	42	79	67	221

^a South Carolina Moderate Priority Designation.

^b South Carolina High Priority Designation.

^c South Carolina Highest Priority Designation.

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Table L-9 Fish Surveys Conducted in Man-Made Lakes/Ponds

Genus	Species	Common Name	Farm Pond	Ledbetter Reservoir
			R93-5	R93-7
<i>Gambusia</i>	<i>holbrooki</i>	Eastern mosquitofish	15	
<i>Aphredoderus</i>	<i>sayanus</i>	Pirate perch		1
<i>Lepomis</i>	<i>macrochirus</i>	Bluegill	10	3
<i>Lepomis</i>	<i>microlophus</i>	Redear sunfish	2	
<i>Micropterus</i>	<i>salmoides</i>	Largemouth bass	2	
Species Richness			4	2
Total Number of Individuals			29	4

a South Carolina Moderate Priority Designation.

b South Carolina High Priority Designation.

c South Carolina Highest Priority Designation.

d Individuals captured outside survey area.

e Totals not available due to no numbers being reported.

Table L-10 Summary of 2012 Migratory Fish Sampling by ARCADIS

Genus	Species	Common Name	MFS1				MFS2				MFS3			
			Electro	Fyke Net	Eel Trap	Total	Electro	Fyke Net	Eel Trap	Total	Electro	Fyke Net	Eel Trap	Total
<i>Anguilla</i>	<i>rostrata</i>	American eel ^c	2			2					5			5
<i>Clinostomus</i>	<i>funduloides</i>	Rosyside dace												
<i>Cyprinella</i>	<i>chloristia</i>	Greenfin shiner ^a			66	66			138	138				
<i>Cyprinella</i>	<i>nivea</i>	Whitefin shiner												
<i>Cyprinella</i>	<i>pyrrhomela</i>	Fieryblack shiner ^a												
<i>Nocomis</i>	<i>leptocephalus</i>	Bluehead chub			86	86			107	107				
<i>Notemigonus</i>	<i>crysoleucas</i>	Golden shiner												
<i>Notropis</i>	<i>altipinnis</i>	Highfin shiner			77	77								
<i>Notropis</i>	<i>chlorocephalus</i>	Greenhead Shiner ^b							9	9				
<i>Notropis</i>	<i>cummingsae</i>	Dusky shiner			1	1					4	4		
<i>Notropis</i>	<i>petersoni</i>	Coastal shiner											3	3
<i>Notropis</i>	<i>procne</i>	Swallowtail shiner			32	32			1	1				
<i>Notropis</i>	<i>scepticus</i>	Sandbar shiner												
<i>Semotilus</i>	<i>atromaculatus</i>	Creek chub												
<i>Semotilus</i>	<i>lumbee</i>	Sandhills chub ^c												
<i>Erimyzon</i>	<i>oblongus</i>	Creek chubsucker	2		2				1	1				
<i>Minytrema</i>	<i>melanops</i>	Spotted sucker									8			8
<i>Scartomyzon</i>	<i>sp.</i>	Brassy jumprock	1		1		2		2					
<i>Ameiurus</i>	<i>brunneus</i>	Snail bullhead ^a												
<i>Ameiurus</i>	<i>melas</i>	Black bullhead										1		1
<i>Ameiurus</i>	<i>natalis</i>	Yellow bullhead												
<i>Ameiurus</i>	<i>platycephalus</i>	Flat bullhead ^a			1	1			4	4			2	2
<i>Noturus</i>	<i>gyrinus</i>	Tadpole madtom											2	2
<i>Noturus</i>	<i>insignis</i>	Margined madtom			1	1			3	3				
<i>Esox</i>	<i>americanus</i>	Redfin pickerel							1	1				
<i>Esox</i>	<i>niger</i>	Chain pickerel												
<i>Gambusia</i>	<i>holbrooki</i>	Eastern mosquitofish			1	1								
<i>Aphredoderus</i>	<i>sayanus</i>	Pirate perch			17	17			13	13			2	2

Genus	Species	Common Name	MFS1				MFS2				MFS3			
			Electro	Fyke Net	Eel Trap	Total	Electro	Fyke Net	Eel Trap	Total	Electro	Fyke Net	Eel Trap	Total
<i>Acantharchus</i>	<i>pomotis</i>	Mud sunfish ^a												
<i>Centrarchus</i>	<i>macropterus</i>	Flier												
<i>Enneacanthus</i>	<i>gloriosus</i>	Bluespotted sunfish												
<i>Lepomis</i>	<i>auritus</i>	Redbreast sunfish			95	95				16	16			
<i>Lepomis</i>	<i>cyanellus</i>	Green sunfish			1	1								
<i>Lepomis</i>	<i>gibbosus</i>	Pumpkinseed												
<i>Lepomis</i>	<i>gulosus</i>	Warmouth												
<i>Lepomis</i>	<i>macrochirus</i>	Bluegill												
<i>Lepomis</i>	<i>marginatus</i>	Dollar sunfish												
<i>Lepomis</i>	<i>microlophus</i>	Redear sunfish												
<i>Lepomis</i>	sp. (YOY)	Sunfish species												
<i>Micropterus</i>	<i>salmoides</i>	Largemouth bass												
<i>Etheostoma</i>	<i>olmstedi</i>	Tessellated darter			9	9				4	4			
<i>Etheostoma</i>	<i>serrifer</i>	Sawcheek darter												
<i>Percina</i>	<i>crassa</i>	Piedmont darter ^b												
<i>Perca</i>	<i>flavescens</i>	Yellow perch												
<i>Umbra</i>	<i>pygmaea</i>	Eastern mudminnow												

^a South Carolina Moderate Priority Designation.

^b South Carolina High Priority Designation.

^c South Carolina Highest Priority Designation.

Table L-11 Summary of Bioclassification Scores for Benthic Macroinvertebrates

Waterbody	Ecoregion	Location	Spring 2012	Fall 2011	Spring 2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	
Haile Gold Mine Creek	Sandhills	B																									
			EPT Score		1																						
			BI Score		5																						
			Mean Score		3																						
			Classification		good-fair																						
			HGMC1-11/HGMC1-12																								
			EPT Score	1	1																						
			BI Score	2.6	2																						
			Mean Score	1.8	1.5																						
			Classification	fair	fair																						
			2A/HGMC3-12																								
			EPT Score	1.6		1.4	1	1	1	1.6	1	1	1	1.6	1	2	1.4	2	1.6	2.4	2	1.6	2	2	2		
			BI Score	5		5	5	5	3	4	4	2	3	1	3	5	5	5	5	5	5	5	5	4	5	5	
			Mean Score	3.3		3.2	3	3	2	2.7	2.5	1.5	2	1	2.3	3	3.5	3.2	3.5	3.3	3.7	3.5	3.3	3	3.5	3.5	
			Classification	good-fair		good-fair	good-fair	good-fair	good-fair	good-fair	good-fair	fair	poor	fair	good-fair	good	good-fair	good	good-fair	good	good-fair	good	good-fair	good	good	good	
			HGMC4-12																								
			EPT Score	2																							
			BI Score	4																							
			Mean Score	3																							
			Classification	good-fair																							
			HGMC5-12																								
			EPT Score	1.6																							
			BI Score	4																							
			Mean Score	2.8																							
			Classification	good-fair																							
			3A																								
			EPT Score		1	1	1	1	1	1	1	1	1	1	1	1	1.4	1	1	1	1	1	1	1	1	1	
			BI Score		5	5	2	4	4	1.4	3	5	3.6	2	5	3	3	4.6	5	5	4	4	1.6				
			Mean Score		3	3	1.5	2.5	2.5	1.2	2	3	2.3	1.5	3	2	2.2	2.8	3	3	2.5	2.5	1.3				
			Classification		good-fair	good-fair	fair	good-fair	good-fair	poor	fair	good-fair	fair	good-fair	fair	good-fair	good	good-fair	good	good-fair	good	good-fair	good	poor			
			4																								
			EPT Score		1	1	1	1	1	1	1	1	1	1	1	1	1.4	1	1	1	1	1	1	1	1	1	
			BI Score		3	4	2	1	1	2	2	4	2	1	2	1	4.6	4.6	3	5	5	3	3				
			Mean Score		2	2.5	1.5	1	1	1.5	1.5	2.5	1.5	1	1.5	1	3	2.8	2	3	3	2	2				
			Classification		fair	good-fair	fair	poor	poor	fair	fair	good-fair	fair	poor	fair	poor	good-fair	good	good-fair	good	good-fair	good	fair	fair			
			5																								
			EPT Score		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
			BI Score		2.4	4	2	1	2.6	2	2.6	2					1	1.6	2	5	5	1	3	2			
			Mean Score		1.7	2.5	1.5	1	1.8	1.5	1.8	1.5					1.3	1.3	1.5	3	3	1	2	1.5			
			Classification		fair	good-fair	fair	poor	fair	fair	fair	good-fair					poor	fair	good-fair	good	good-fair	good	poor	fair	fair		
			6																								

Waterbody	Ecoregion	Location	Spring 2012	Fall 2011	Spring 2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
		BI Score			4	4	5	2	3	3	3	2	3	1	2	2	5	5	3	1	4	Sample	Sample	Sample	Sample	
		Mean Score			2.5	2.5	3	1.5	2	2	2	2	1.5	2	1	1.5	1.7	4	3	2	1	2.5				
		Classification			good-fair	good-fair	good-fair	fair	fair	fair	fair	fair	fair	poor	fair	fair	good	good-fair	fair	poor	good-fair					
		8/HGMC2-11/HGMC2-12																								
		EPT Score	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		BI Score	2	2	3	1.4	1.4	3	4	4	4	4	2	1	1	1	1	2.6	1	2.4	3.6	3	1	1	2	Dy
		Mean Score	1.5	1.5	2	1.2	1.2	2	2.5	2.5	2.5	2.5	1.5	1	1	1	1	1.8	1	1.7	2.3	2	1	1	1.5	
		Classification	fair	fair	fair	poor	poor	fair	good-fair	good-fair	good-fair	good-fair	fair	poor	poor	poor	poor	fair	poor	fair	fair	fair	poor	poor	poor	
		9																								
		EPT Score			1	1	1	1	1	1	1	1	1	1	1	1	1	1.6	1	1	1	1	1	1	1	No BI
		BI Score			3	2	2	2	2	3	3	4	2	1	2	1	1	2.6	3	2	2	2	1	1	1	
		Mean Score			2	1.5	1.5	1.5	1.5	2	2	2.5	1.5	1	1.5	1	1	2.1	2	1.5	1.5	1.5	1	1.5	1	
		Classification			fair	fair	fair	fair	fair	fair	fair	fair	fair	poor	fair	poor	fair	poor								
	Little Lynches River	LL1/LLR1-11/LLR1-12																								
		EPT Score	2	1	3																					
		BI Score	3	2	3																					
		Mean Score	2.5	1.5	3																					
		Classification	good-fair	fair	good-fair																					
		LLR-2																								
		EPT Score	1	1																						
		BI Score	2	1																						
		Mean Score	1.5	1																						
		Classification	fair	poor																						
		10/LLR3-11/LLR3-12																								
		EPT Score	2	1.4	2.6	2	2.4	2.4	2	2.4	2	2	2	1.6	2.6	2	2	2.4	2.6	2	3	3	1.6	2.4	1.4	2
		BI Score	3.4	2	5	4	5	3	5	5	5	5	5	4	5	3	3	3	3	3	3.6	4	4	4	3	5
		Mean Score	2.7	1.7	3.8	3	3.7	2.7	3.5	3.7	3.5	3.5	3.5	2.8	3.8	2.5	2.5	2.7	2.8	2.5	3.3	3.5	2.8	3.2	2.2	3.5
		Classification	good-fair	fair	good	good-fair	good	good-fair	good	good	good	good	good	good-fair	good	fair	good-fair	good-fair	good-fair	good-fair	good-fair	good	good-fair	good-fair	good-fair	LLR-4
		EPT Score	2	1																						
		BI Score	4	2																						
		Mean Score	3	1.5																						
		Classification	good-fair	fair																						
		11																								
		EPT Score			2.6	2.4	2	2	2	2.4	2	1.6	1.4	2	2	2	2	2	2	2	2	2.4	2	2	1.4	2
		BI Score			5	5	5	3	5	5	5	4	5	4	4	4	3	3	3	3	4	4	3	4	3	4
		Mean Score			3.8	3.7	3.5	2.5	3.5	3.7	3.5	2.8	3.2	3	3	3	2.5	2.5	2.5	2.5	3	3.2	2.5	3	2.2	3
		Classification			good	good	good	good-fair	good	good	good	good-fair														
		LLR-5																								
		EPT Score			1.4																					
		BI Score			2																					

Waterbody	Ecoregion	Location	Spring 2012	Fall 2011	Spring 2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
		LLR-6																								
		EPT Score	2	2																						
		BI Score	4	2																						
		Mean Score	3	2																						
		Classification	good-fair	fair																						
	Camp Branch Creek	CB1/CB1-11																								
		EPT Score	1	1																						
		BI Score	5	4																						
		Mean Score	3	2.5																						
		Classification	good-fair	good-fair																						
		CB2-12																								
		EPT Score	2																							
		BI Score	5																							
		Mean Score	3.5																							
		Classification	good																							
	Sandhills	CB4-12																								
		EPT Score	1																							
		BI Score	2																							
		Mean Score	1.5																							
		Classification	fair																							
		CB5-12																								
		EPT Score	1																							
		BI Score	4																							
		Mean Score	2.5																							
		Classification	good-fair																							
	Piedmont	CB6-12																								
		EPT Score	2																							
		BI Score	5																							
		Mean Score	3.5																							
		Classification	good																							
		CB2/CB3-11																								
		EPT Score	2	2.4	2.6																					
		BI Score	3	4.4	5																					
		Mean Score	2.5	3.4	3.8																					
		Classification	good-fair	good-fair	good																					
	Ledbetter Reservoir	2B																								
		EPT Score		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		BI Score		1	2	1	1	1	2	2	1.6	2	1.4	2	1	2	1	1	1	1.4	2	2.6	2	2	2	2
		Mean Score		1	1.5	1	1	1	1.5	1.5	1.3	1.5	1.2	1.5	1	1.5	1	1	1.2	1.5	1.8	1.5	1.5	1.5	1.5	1.5
		Classification		poor	fair	poor	poor	poor	fair	fair	poor	fair	poor	fair	poor	fair	poor	poor	poor	poor	fair	fair	fair	fair	fair	fair
		2C																								
		EPT Score		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		BI Score		1	1	1	1	1	1	1	2	1.6	2	1.6	2	1	2	1	1	2	2	2	2	2	2	2.6
		Mean Score		1	1	1	1	1	1	1	1.5	1.3	1.5	1.3	1.5	1	1.5	1	1	1.5	1.5	1.5	1.5	1.5	1.5	1.8
		Classification		poor	poor	poor	poor	poor	poor	fair	poor	fair	poor	fair	poor	fair	poor	poor	poor	poor	fair	fair	fair	fair	fair	fair

Waterbody	Ecoregion	Location	Spring 2012	Fall 2011	Spring 2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
		3																								
		EPT Score			1	1	1	1	1	1	1	1	1	1	1	1	1.4	1	1	1	1	2	1	1	1	1
		BI Score			1.6	1	1	1	2	2.4	2	1.4	2	2	1	2.6	2	3	1	2	3	3	3.6		3	2
		Mean Score			1.3	1	1	1	1.5	1.7	1.5	4.2	1.5	1.5	1	1.8	1.7	2	1	1.5	2	2.5	2.3		2	1.5
		Classification			poor	poor	poor	poor	fair	fair	fair	poor	fair	fair	poor	fair	fair	fair	poor	fair	fair	good-fair	fair	fair	fair	fair
	Sandhills	BC2																								
		EPT Score	3	2																						
		BI Score	5	5																						
		Mean Score	4	3.5																						
		Classification	good	good-fair																						
		BC4																								
		EPT Score		2.4																						
		BI Score		5																						
	Sandhills	Mean Score		3.7																						
		Classification		good																						
		UT1																								
		EPT Score	2																							
	Unnamed Tributary	BI Score	5																							
		Mean Score	3.5																							
		Classification	good																							

Table L-12 Summary of Freshwater Mussels Observed in the Little Lynches and Lynches River Basins

Survey Date	Station Name	Waterbody	Method	Common Name	Scientific Name	Living Specimens	Shells Collected	Status
Fall 1986	K88-1	Lynches River	Unknown	Brook floater	<i>Alasmidonta varicosa</i>			SCDNR Highest
Fall 1986	K88-1	Lynches River	Unknown	Asian clam	<i>Corbicula fluminea</i>			Introduced
Fall 1986	K88-1	Lynches River	Unknown	Lapped elimia	<i>Elimia catenaria dislocata</i>			Unknown
Fall 1986	K88-1	Lynches River	Unknown	Eastern elliptio	<i>Elliptio complanata</i>			SCDNR Moderate
Fall 1986	K88-1	Lynches River	Unknown	Carolina slabshell	<i>Elliptio congregaea</i>			SCDNR Moderate
Fall 1986	K88-1	Lynches River	Unknown	Carolina heelsplitter	<i>Lasmigona decorata</i>			Endangered
Fall 1986	K88-1	Lynches River	Unknown	Creeper mussel	<i>Strophitus undulatus</i>			SCDNR High
Fall 1986	K88-1	Lynches River	Unknown	Notched rainbow	<i>Villosa constricta</i>			SCDNR Highest
Fall 1986	K88-2	Lynches River	Unknown	Asian clam	<i>Corbicula fluminea</i>			Introduced
Fall 1986	K88-2	Lynches River	Unknown	Lapped elimia	<i>Elimia catenaria dislocata</i>			Unknown
Fall 1986	K88-2	Lynches River	Unknown	Eastern elliptio	<i>Elliptio complanata</i>		#	SCDNR Moderate
Fall 1986	K88-2	Lynches River	Unknown	Carolina slabshell	<i>Elliptio congregaea</i>		#	SCDNR Moderate
Fall 1986	K88-2	Lynches River	Unknown	Carolina heelsplitter	<i>Lasmigona decorata</i>	#		Endangered
Fall 1986	K88-2	Lynches River	Unknown	Eastern creekshell	<i>Villosa delumbis</i>		#	SCDNR Moderate
Fall 1987	K88	Lynches River	Unknown	Brook floater	<i>Alasmidonta varicosa</i>			SCDNR Highest
Fall 1987	K88	Lynches River	Unknown	Gaspe floater	<i>Anodonta cataracta</i>			Unknown
Fall 1987	K88	Lynches River	Unknown	Asian clam	<i>Corbicula fluminea</i>			Introduced
Fall 1987	K88	Lynches River	Unknown	Freshwater Snail	<i>Elliptio spp.</i>			Unknown
Fall 1987	K88	Lynches River	Unknown	Two-ridge rams-horn	<i>Helisoma anceps</i>			Common
Fall 1987	K88	Lynches River	Unknown	Aquatic snail	<i>Physella sp.</i>			Unknown
Fall 1987	K88	Lynches River	Unknown	American ribbed fluke snail	<i>Pseudosuccinea columella</i>			Unknown
8/11/1990	K91-1	Lynches River	Unknown	Brook floater	<i>Alasmidonta varicosa</i>	1	0	SCDNR Highest
8/11/1990	K91-1	Lynches River	Unknown	Freshwater Snail	<i>Elliptio spp.</i>	107	36	Unknown
8/11/1990	K91-1	Lynches River	Unknown	Carolina heelsplitter	<i>Lasmigona decorata</i>	4	4	Endangered
9/30/1990	K91-2	Flat Creek	Unknown	Carolina spike	<i>Elliptio raveneli</i>	42	13	Unknown
9/30/1990	K91-2	Flat Creek	Unknown	Freshwater Snail	<i>Elliptio spp.</i>	2	8	Unknown
9/30/1990	K91-2	Flat Creek	Unknown	Carolina heelsplitter	<i>Lasmigona decorata</i>	2	6	Endangered

Survey Date	Station Name	Waterbody	Method	Common Name	Scientific Name	Living Specimens	Shells Collected	Status
9/30/1990	K91-2	Flat Creek	Unknown	Eastern creekshell	<i>Villosa delumbis</i>	1	4	SCDNR Moderate
10/7/1990	K91-1	Lynches River	Unknown	Brook floater	<i>Alasmidonta varicosa</i>	0	1	SCDNR Highest
10/7/1990	K91-1	Lynches River	Unknown	Freshwater Snail	<i>Elliptio spp.</i>	105	4	Unknown
10/7/1990	K91-1	Lynches River	Unknown	Carolina heelsplitter	<i>Lasmigona decorata</i>	8	0	Endangered
10/7/1990	K91-1	Lynches River	Unknown	Notched rainbow	<i>Villosa constricta</i>	1	0	SCDNR Highest
10/24/1992	K92-1 to K92-6 and K92-7 to K92-11	Haile Gold Mine Creek and Little Lynches River	Visual/Hand/Raking		Nothing Collected	0	0	
7/24/2008-7/25/2008	K08-7	Little Lynches River	Visual/Hand/Raking	Asian clam	<i>Corbicula fluminea</i>	#	#	Introduced
7/24/2008-7/25/2008	K08-8	Little Lynches River	Visual/Hand/Raking	Asian clam	<i>Corbicula fluminea</i>	#	#	Introduced
7/24/2008-7/25/2008	K08-10	Little Lynches River	Visual/Hand/Raking	Eastern pondhorn	<i>Uniomerus carolinianus</i>	0	1	Common
7/24/2008-7/25/2008	K08-5	Gault Lake	Visual/Hand/Raking	Asian clam	<i>Corbicula fluminea</i>	#	#	Introduced
7/24/2008-7/25/2008	K08-1 to K08-4	Haile Gold Mine Creek and Ledbetter Reservoir	Visual/Hand/Raking		Nothing Collected	0	0	
8/11/2010	K10-1 to K10-5	Camp Branch Creek	Visual/Hand/Raking		Nothing Collected	0	0	
8/24/2011	110824.1	Bufflao Creek	Visual/Tactile	Eastern elliptio	<i>Elliptio complanata</i>	2	3	SCDNR Moderate
8/24/2011	110824.1	Bufflao Creek	Visual/Tactile	Eastern pondhorn	<i>Uniomerus carolinianus</i>	0	4	Common
9/7/2011	110907.1a-c	Little Lynches River	Visual/Tactile	Asian clam	<i>Corbicula fluminea</i>	#	#	Introduced
9/7/2011	110907.1b	Little Lynches River	Visual/Tactile	Two-ridge rams-horn	<i>Helisoma anceps</i>	#	#	Common
9/7/2011	110907.1b	Little Lynches River	Visual/Tactile	Pond snail	<i>Physa sp.</i>	#	#	Unknown
9/9/2011	110909.1a	Camp Branch Creek	Visual/Tactile	Asian clam	<i>Corbicula fluminea</i>	#	#	Introduced
9/13/2011	110913.1	Unnamed Tributary	Visual/Tactile		Nothing Collected			
9/14/2011	110914.1	Haile Gold Mine Creek	Visual/Tactile		Nothing Collected	0	0	

Table L-13 Summary of Herpetological Species Observed

Survey Date	Station Name	Location Observed/Waterbody	Method	Species Common Name	Scientific Name	Updated Scientific Name	Status
7/31/1993	--	Farm Pond	Incidental	American Bullfrog	<i>Rana catesbeiana</i>	<i>Lithobates catesbeianus</i>	Common
7/31/1993	--	On Property	Incidental	Eastern Garter Snake	<i>Thamnophis sirtalis</i>	<i>Thamnophis sirtalis sirtalis</i>	Common
7/31/1993	--	Farm Pond, HGMC, LLR	Incidental	Green/Broze Frog	<i>Rana clamitans</i>	<i>Lithobates clamitans</i>	Common
7/31/1993	--	HGMC, LLR	Incidental	Red-bellied Water Snake	<i>Nerodia erythrogaster erythrogaster</i>	<i>Nerodia erythrogaster erythrogaster</i>	Common
7/31/1993	--	Farm Pond	Incidental	Six-lined Racerunner	<i>Cnemidophorus sexlineatus</i>	<i>Aspidoscelis sexlineata</i>	Common
7/31/1993	--	On Property	Incidental	Southern Toad	<i>Bufo terrestris</i>	<i>Anaxyrus terrestris</i>	Common
7/23/2008	R08-4	Pond Downstream of Snake Pit	Dip net	Mole Salamander	<i>Ambystoma</i> sp.		Dependent on Species
7/23/2008	R08-4	Pond Downstream of Snake Pit	Dip net	Unknown tadpoles			Unknown
7/23/2008	R08-5	Haile Gold Mine Creek	Dip net	Northern Dusky Salamander	<i>Desmognathus fuscus</i>		Common
7/24/2008	K08-7	Haile Gold Mine Creek	Incidental	Unknown tadpoles			Unknown
7/25/2008	K08-8	Little Lynches River	Incidental	Unknown tadpoles			Unknown
8/2/2010	R10-1	Camp Branch Creek	Dip net	Unknown salamanders			Unknown
11/1/2011	BC4-11	Buffalo Creek	Incidental	Green Anole	<i>Anolis carolinensis</i>		Common
11/1/2011	CB3-11	Camp Branch Creek	Dip net	Southern 2-Lined Salamander	<i>Eurycea cirrigera</i>		Common
10/18/2011	HGMC2-11	Haile Gold Mine Creek	Mesh net	Northern Cricket Frog	<i>Acris crepitans</i>		SCDNR Moderate
10/18/2011	HGMC2-11	Haile Gold Mine Creek	Incidental	Southeastern Five-Lined Skink	<i>Eumeces inexpectatus</i>	<i>Plestiodon inexpectatus</i>	Common
10/18/2011	LLR1-11	Little Lynches River	Mesh net	Northern Cricket Frog	<i>Acris crepitans</i>		SCDNR Moderate
10/18/2011	LLR1-11	Little Lynches River	Dip net	Southern 2-Lined Salamander	<i>Eurycea cirrigera</i>		Common
10/18/2011	LLR2-11	Little Lynches River	Mesh net	Southern Cricket Frog	<i>Acris gryllus</i>		Common
10/18/2011	LLR2-11	Little Lynches River	Incidental	Pine Woods Treefrog	<i>Hyla femoralis</i>		Common
10/18/2011	LLR2-11	Little Lynches River	Incidental	River Frog	<i>Rana heckscheri</i>	<i>Lithobates heckscheri</i>	Common
10/18/2011	LLR3-11	Little Lynches River	Incidental	Green Treefrog	<i>Hyla cinerea</i>		Common
10/18/2011	LLR3-11	Little Lynches River	Dip net	Southern 2-Lined Salamander	<i>Eurycea cirrigera</i>		Common
10/18/2011	LLR4-11	Little Lynches River	Dip net	Southern 2-Lined Salamander	<i>Eurycea cirrigera</i>		Common

Survey Date	Station Name	Location Observed/Waterbody	Method	Species Common Name	Scientific Name	Updated Scientific Name	Status
10/18/2011	LLR4-11	Little Lynches River	Incidental	Green Anole	<i>Anolis carolinensis</i>		Common
10/18/2011	LLR4-11	Little Lynches River	Dip net	Unknown Tadpoles (possibly Bullfrog)	<i>Rana catesbeiana</i>	<i>Lithobates catesbeianus</i>	Common
11/1/2011	LLR5-11	Little Lynches River	Dip net	Southern 2-Lined Salamander	<i>Eurycea cirrigera</i>		Common
11/2/2011	LLR6-11	Little Lynches River	Dip net	Southern 2-Lined Salamander	<i>Eurycea cirrigera</i>		Common
11/2/2011	LLR6-11	Little Lynches River	Incidental	Green Treefrog	<i>Hyla cinerea</i>		Common
4/9/2012 ^a	R08-2	Haile Gold Mine Creek	Incidental	Common Snapping Turtle	<i>Chelydra serpentina</i>		SCDNR Moderate
4/10/2012 ^a	Near ETT-9	Haile Gold Mine Creek	Incidental	Black Racer	<i>Coluber constrictor</i>		Common
4/10/2012 ^a	CB3	Camp Branch Creek	Incidental	Unknown tadpoles			Unknown
4/10/2012 ^a	LLR1	Little Lynches River	Incidental	Unknown tadpoles			Unknown
4/10/2012 ^a	LLR1	Little Lynches River	Call	Southern Cricket Frog	<i>Acris gryllus</i>		Common
4/10/2012 ^a	LLR4	Little Lynches River	Incidental	Green Anole	<i>Anolis carolinensis</i>		Common
4/17/2012	MFS1	Little Lynches River	Hoop Net	Slider Turtle	<i>Trachemys scripta</i>		SCDNR High
4/17/2012	MFS1	Little Lynches River	Incidental	Cottonmouth/Water moccasin	<i>Agkistrodon piscivorus</i>		Common
3/28/2012	MFS2	Little Lynches River	Incidental	Common Snapping Turtle	<i>Chelydra serpentina</i>		SCDNR Moderate
3/29/2012	MFS2	Little Lynches River	Hoop Net	Common Snapping Turtle	<i>Chelydra serpentina</i>		SCDNR Moderate
4/17/2012	MFS2	Little Lynches River	Hoop Net	Slider Turtle	<i>Trachemys scripta</i>		SCDNR High
4/17/2012	MFS2	Little Lynches River	Incidental	Cottonmouth/Water moccasin	<i>Agkistrodon piscivorus</i>		Common
4/17/2012	MFS4	Haile Gold Mine Creek	Incidental	Green/Bronze Frog	<i>Rana clamitans</i>	<i>Lithobates clamitans</i>	Common
4/6/2012	BC2-12	Buffalo Creek	Incidental	Green/Bronze Frog	<i>Rana clamitans</i>	<i>Lithobates clamitans</i>	Common
4/5/2012	CB4-12	Camp Branch Creek	Incidental	Green Anole	<i>Anolis carolinensis</i>		Common
4/5/2012	CB4-12	Camp Branch Creek	Incidental	Eastern Box Turtle	<i>Terrapene carolina carolina</i>		Common
4/5/2012	CB4-12	Camp Branch Creek	Incidental	Southern Leopard Frog	<i>Rana sphenocephala</i>	<i>Lithobates sphenocephala</i>	Common
4/4/2012	CB5-12	Camp Branch Creek	Incidental	Northern Water Snake	<i>Nerodia sipedon</i>		Common
4/4/2012	CB6-12	Camp Branch Creek	Incidental	Southern Cricket Frog	<i>Acris gryllus</i>		Common
4/4/2012	CB6-12	Camp Branch Creek	Incidental	Southern 2-Lined Salamander	<i>Eurycea cirrigera</i>		Common
4/6/2012	HGMC1-12	Haile Gold Mine Creek	Incidental	Southern Cricket Frog	<i>Acris gryllus</i>		Common

Survey Date	Station Name	Location Observed/Waterbody	Method	Species Common Name	Scientific Name	Updated Scientific Name	Status
4/6/2012	HGMC1-12	Haile Gold Mine Creek	Incidental	Green/Bronze Frog	<i>Rana clamitans</i>	<i>Lithobates clamitans</i>	Common
4/7/2012	HGMC2-12	Haile Gold Mine Creek	Incidental	Green/Bronze Frog	<i>Rana clamitans</i>	<i>Lithobates clamitans</i>	Common
4/7/2012	HGMC2-12	Haile Gold Mine Creek	Incidental	Green Anole	<i>Anolis carolinensis</i>		Common
4/6/2012	HGMC3-12	Haile Gold Mine Creek	Incidental	Green/Bronze Frog	<i>Rana clamitans</i>	<i>Lithobates clamitans</i>	Common
4/6/2012	HGMC3-12	Haile Gold Mine Creek	Incidental	Bullfrog	<i>Rana catesbeiana</i>	<i>Lithobates catesbeianus</i>	Common
4/6/2012	HGMC3-12	Haile Gold Mine Creek	Incidental	Northern Dusky Salamander	<i>Desmognathus fuscus</i>		Common
4/6/2012	HGMC4-12	Haile Gold Mine Creek	Incidental	Green Treefrog	<i>Hyla cinerea</i>		Common
4/6/2012	HGMC4-12	Haile Gold Mine Creek	Incidental	Southern 2-Lined Salamander	<i>Eurycea cirrigera</i>		Common
4/6/2012	HGMC5-12	Haile Gold Mine Creek	Incidental	Two-toed Amphiuma	<i>Amphiuma means</i>		Common
4/7/2012	LLR1-12	Little Lynches River	Incidental	Southern 2-Lined Salamander	<i>Eurycea cirrigera</i>		Common
4/7/2012	LLR2-12	Little Lynches River	Incidental	Green/Bronze Frog	<i>Rana clamitans</i>	<i>Lithobates clamitans</i>	Common
4/7/2012	LLR2-12	Little Lynches River	Incidental	Southern 2-Lined Salamander	<i>Eurycea cirrigera</i>		Common
4/7/2012	LLR2-12	Little Lynches River	Incidental	Green Anole	<i>Anolis carolinensis</i>		Common
4/7/2012	LLR2-12	Little Lynches River	Incidental	Yellowbelly Slider	<i>Trachemys scripta scripta</i>		SCDNR High
4/8/2012	LLR4-12	Little Lynches River	Incidental	Southern 2-Lined Salamander	<i>Eurycea cirrigera</i>		Common
4/8/2012	UT1-12	Unnamed Tributary	Incidental	Green/Bronze Frog	<i>Rana clamitans</i>	<i>Lithobates clamitans</i>	Common
4/8/2012	UT1-12	Unnamed Tributary	Incidental	Southern Leopard Frog	<i>Rana sphenocephala</i>	<i>Lithobates sphenocephala</i>	Common
10/11/12 ^a		Camp Branch Creek	Incidental	Grey Rat Snake	<i>Pantherophis spiloides</i>		Common

^a Species observed by Cardno ENTRIX staff during site visit.

Table L-14 Summary of Periphyton and Aquatic Vegetation Observed

Survey Name-Year	Station Name	Waterbody	Vegetation Type	Species Observed	Common Name
Rohde Fish-2008	R08-1	Haile Gold Mine Creek	Emergent aquatic	<i>Sparganium</i> sp.	Burr-reed
Rohde Fish-2008	R08-2	Haile Gold Mine Creek	Emergent aquatic		
Rohde Fish-2008	R08-4	Haile Gold Mine Creek	Submergent aquatic		
ETT Inverts-2011	2B	Ledbetter Reservoir	Emergent aquatic		
ETT Inverts-2011	2C	Ledbetter Reservoir	Grasses, rushes and emergent aquatic		
ETT Inverts-2011	3	Ledbetter Reservoir	Submergent aquatic	<i>Vallisneria</i> sp.	Eel grass
ETT Inverts-2011	3A	Haile Gold Mine Creek	Algal mats		
ETT Inverts-2011	4	Haile Gold Mine Creek	Emergent aquatic	<i>Typha</i> sp.	Cattail
Aquatic Resources-2011	HGMC1-11	Haile Gold Mine Creek	No aquatic vegetation		
Aquatic Resources-2011	HGMC2-11	Haile Gold Mine Creek	Filamentous periphyton mats		
Aquatic Resources-2011	CB1-11	Camp Branch Creek	Green filamentous algae		
Aquatic Resources-2011	CB1-11	Camp Branch Creek	Emergent aquatic	<i>Polygonum</i> sp.	Knotweed
Aquatic Resources-2011	CB1-11	Camp Branch Creek	Emergent aquatic	<i>Sparganium</i> sp.	Bur-reed
Aquatic Resources-2011	CB2-11	Camp Branch Creek	Sparce red/brown algae		
Aquatic Resources-2011	CB3-11	Camp Branch Creek	Red/brown algae		
Aquatic Resources-2011	LLR1-11	Little Lynches River	No aquatic vegetation		
Aquatic Resources-2011	LLR6-11	Little Lynches River	Dark red/brown periphyton		
Aquatic Resources-2011	BC2-11	Buffalo Creek	Emergent aquatic	<i>Carex</i> sp.	Sedges
Aquatic Resources-2012	HGMC3-12	Haile Gold Mine Creek	No aquatic vegetation		
Aquatic Resources-2012	HGMC4-12	Haile Gold Mine Creek	Filamentous algae		
Aquatic Resources-2012	HGMC4-12	Haile Gold Mine Creek	Emergent aquatic	<i>Juncus</i> sp.	Rushes
Aquatic Resources-2012	HGMC4-12	Haile Gold Mine Creek	Emergent aquatic	<i>Sparganium americanum</i>	American burr-reed
Aquatic Resources-2012	HGMC5-12	Haile Gold Mine Creek	Filamentous algae		
Aquatic Resources-2012	HGMC5-12	Haile Gold Mine Creek	Emergent aquatic	<i>Juncus</i> sp.	Rushes
Aquatic Resources-2012	HGMC5-12	Haile Gold Mine Creek	Emergent aquatic	<i>Sparganium americanum</i>	American burr-reed
Aquatic Resources-2012	HGMC5-12	Haile Gold Mine Creek	Emergent aquatic	<i>Carex</i> spp.	Sedges
Aquatic Resources-2012	CB4-12	Camp Branch Creek	Green filamentous algae		

Survey Name-Year	Station Name	Waterbody	Vegetation Type	Species Observed	Common Name
Aquatic Resources-2012	CB4-12	Camp Branch Creek	Emergent aquatic	<i>Murdannia kiesak</i>	Asian spiderwort
Aquatic Resources-2012	CB4-12	Camp Branch Creek	Emergent aquatic	<i>Sparganium americanum</i>	American burr-reed
Aquatic Resources-2012	CB4-12	Camp Branch Creek	Two other aquatic vegetation species		
Aquatic Resources-2012	CB5-12	Camp Branch Creek	Green filamentous algae		
Aquatic Resources-2012	CB5-12	Camp Branch Creek	Emergent aquatic	<i>Murdannia kiesak</i>	Asian spiderwort
Aquatic Resources-2012	CB5-12	Camp Branch Creek	Emergent aquatic	<i>Sparganium americanum</i>	American burr-reed
Aquatic Resources-2012	CB5-12	Camp Branch Creek	Two other aquatic vegetation species		
Aquatic Resources-2012	CB6-12	Camp Branch Creek	Green filamentous algae		
Aquatic Resources-2012	CB6-12	Camp Branch Creek	Emergent aquatic	<i>Murdannia kiesak</i>	Asian spiderwort
Aquatic Resources-2012	CB6-12	Camp Branch Creek	Emergent aquatic	<i>Sparganium americanum</i>	American burr-reed
Aquatic Resources-2012	CB6-12	Camp Branch Creek	Emergent aquatic	<i>Juncus</i> sp.	Rushes